

Météorologique du France, viz, the twilight glows in October, 1902, the solar and lunar corona and diminution of radiation in December, 1902, and January, 1903. It is, then, surprising that various scientists, describing them in their turn some months later, or summarizing in 1904 the observations made at various places, have appeared to ignore completely the indications given in an official organ for French meteorology.

These indications were, it is true, very brief, as are those that I have just given, and it would certainly be interesting to publish our observations a little more in detail, as I hope to do soon.

But I desire now to point out the difference of intensity which exists, according to my observations, between the phenomena of 1883-1884 and those of 1902-1903. In 1883 (I then observed at Lyons), the twilight glows (the second segment) were more luminous and more prolonged, and the diffraction circles coronæ or anthelia, were much more brilliant and easy to see than in 1903.

THE SOLAR ECLIPSE OF AUGUST 30, 1905, AS VISIBLE IN THE UNITED STATES.

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The solar eclipse of August 30, 1905, will, as is well known, be a total eclipse. But as the path of totality begins just outside of the United States, the eclipse becomes for us a partial one and occurs near the time of sunrise. A map of this eclipse specially constructed for the United States and showing

the varied degrees of obscuration attained in the different States, will, therefore, I trust, be of interest to the reader, and it is accordingly given herewith. (See Fig. 1). This eclipse map was constructed graphically according to the method explained by the writer in Popular Astronomy Nos. 32, 33, 34, of August, September, and October, 1896.

A great part of the sunrise oval lies across the United States. Its eastern branch entitled "Eclipse begins at Sunrise," its middle line showing the "Middle of the Eclipse at Sunrise," and its western branch on which the "Eclipse ends at Sunrise," are sufficiently intelligible not to need any explanation. The smaller ovals marked 2, 4, 6, 8, show the even tenths of obscuration, that is, of the sun's diameter obscured, at the moments of sunrise. For example, all along the oval 6 the sun rises six-tenths eclipsed, along the eastern branch of this oval the eclipse is increasing and along the western branch decreasing at this moment.

The system of lines approximately at right-angles to the middle of the eclipse line denotes every tenth of obscuration for the middle of the eclipse, or, in other words, the maximum obscuration.

A couple of examples will illustrate the use of the eclipse map. At Cincinnati, Ohio, the sun rises with an obscuration of 0.50, and this increases to 0.67. At Omaha, Nebr., the obscuration at sunrise is 0.56 and is diminishing.

The dotted lines marked V, VI, VII, at the bottom of the map, show the places at which sunrise occurs at 5, 6, 7, o'clock, central time. C is the point of first contact.

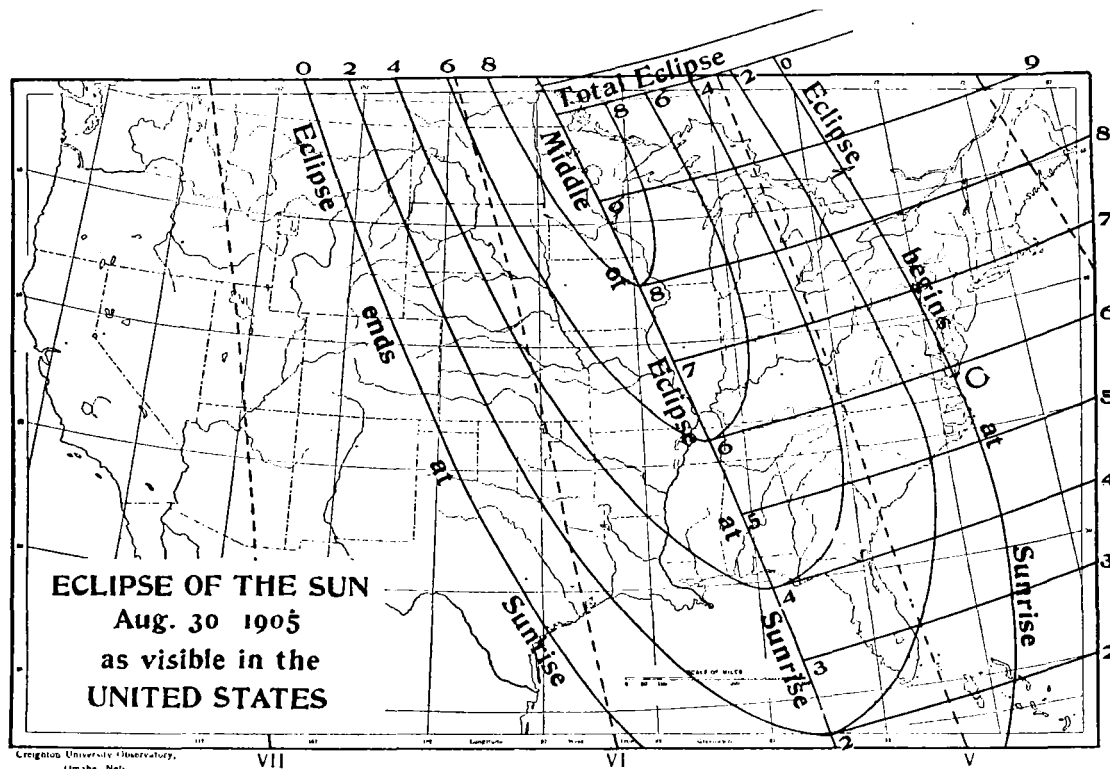


FIG. 1.—Map showing the degrees of obscuration in the different States.

NOTES AND EXTRACTS.

TORNADO NEAR BLUFF SPRINGS, FLA., MARCH 20, 1905.

Mr. William F. Reed, jr., observer at Pensacola, submits a report of a tornado near Bluff Springs, about 40 miles north of Pensacola, early in the morning of March 20. The morning weather map of that date shows an area of low pressure central near Meridian, Miss., with thunderstorms at Pensacola, Mobile, Meridian, Montgomery, and Nashville, and the follow-

ing heavy rainfalls were reported: Mobile, Ala., 9.20 inches; New Orleans, La., 5.48; Birmingham, Ala., 1.76; Montgomery, Ala., 1.50; Pensacola, Fla., 1.84; Nashville, Tenn., 1.16; Corpus Christi, Tex., 1.06.

Owing to the hour of occurrence, 4 a. m., and its brief duration, the storm was not generally noticed, so far as known. Mr. G. M. Gentry, whose residence was in the path of the storm, furnishes the accompanying sketch, fig. 1, showing